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XILOG

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The Microcomputer Magazine for VZ200, VZ300 and AQUARIUS users.

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INTRODUCTION

Welcome to the first issue of the new look 'XILOG' and a special welcome to users who have just joined us. For the benefit of you new readers I will take this opportunity to give a brief history of 'XILOG' and the user group.

The Auckland VZ200 users group formed about 7 months ago through advertisments that I placed in the local papers . An initial meeting was held at my home to which any users were welcome and approximately 30 attended.

The meeting was intended to decide how the club was going to operate and who was going to run it etc. However it ended up as a mass of VZ200 users talking to each other and exchanging tapes of programmes .

A committee was soon formed consisting of PRESIDENT (myself), SECRETARY (Lyall Taverner) and TREASURER (Marc Atkinson). It was decided that in any case a membership fee would be necessary and $10 per year seemed a reasonable figure.

The first 'proper' meeting was arranged and held at Anchorage Park School, Pakuranga. Enthusiastic users turned up and membership fees were collected. At this stage it was confirmed that a monthly newsletter would be an ideal way of keeping everyone in touch with what was going on in the club and hence 'XILOG' was created.

The option of correspondence membership appeared for users living too far away to attend the meetings who could have 'XILOG' mailed to them each month.

Material was collected for the first issue and it was completed in time for the next meeting. However the available amount of programmes etc decreased dramatically to a stage when it was almost impossible to put an issue together. Pleading and begging brought in a small amount more which was soon used and the future for 'XILOG' looked very grim.

It was then decided that the best way to get help would be from Dick Smith Electronics themselves and we decided to merge with them and to also incorporate the AQUARIUS and soon to be released VZ300 computers. While in the mood for changes we also decided to go nationwide and start calling ourselves 'THE VZ / AQUARIUS USERS GROUP'.

D.S.E offered to help out by printing and distributing 'XILOG' for us free of charge to all users on their mail list so that we could get the feedback from a wider audience and they could promote their products.

So I take this opportunity to ask you for any programmes or anything to do with computers that could be of intrest to other VZ and AQUARIUS users .

Also, if you would be prepared to write a column each month on anything to do with computing then please let me know.

The address of the VZ / AQUARIUS USERS GROUP for any

programmes
letters
problems
thoughts
questions
articles
or anything else

is:VZ/AQUARIUS USERS
22 USSHER PLACE
PAKURANGA,
AUCKLAND
(Ph:562166)

Hope to hear from you all soon !!

Julian Bish

(PRESIDENT)

Material intended for "Xilog" should be submitted either on Tape (several copies preferably) or be Typed and be accompanied by adequate explanatory notes including senders name and address. VZ200/300 users please use "Word Processor" for all items other than programs. Material submitted to "Xilog" becomes the property of the VZ/AQUARIUS Users Group and may be treated at the editors discretion.

Contributions without reward to - Xilog, 22 Ussher Place, Pakuranga, Auckland. ph AK 562-166

REVIEW

AQUARIUS

One of Dick Smith Electronic's latest computer releases is the *Aquarius*. Priced at $179, it is obviously intended for the same market as the *VZ200*.

When we received our review machine, it was still in its box, unopened. When all the packaging is removed (it was very neatly packed), you are left with one *Aquarius* computer, power supply, video cable (10 feet of it!), an antenna switchbox, *Aquarius Guide to Home Computing*, simplified instruction cards, a keyboard overlay, but no cassette leads. They are available for $7.95

The *Aquarius* is physically longer than the *VZ200*, but not as deep. All connections are made at the back, with one socket for the TV, a DIN plug for the cassette, and one for the serial printer. The power transformer cable is of a generous length, and is permanently connected to the computer. At one end of the computer there is a small compartment, of which a cover is easily removed (probably too easily, as there is no screws to hold it in) to reveal an expansion connector. The on/off switch is on the right hand side, as with the small power light. The antenna switchbox allows you to switch between the TV aerial (so you can watch TV) and the computer without having to unplug plugs.

MOTORSPORT

M BAXTER AUCKLAN

IN THIS GAME YOU USE THE ARROW KEYS AND STEER YOUR CAR DOWN A WINDING ROAD.WHEN YOU RUN THE GAME HIT A NUMBER FROM 0-9 FOR HOW MANY DRIVERS YOU WISH TO PLAY.THEN ENTER THEIR NAMES.WHEN EVERYONE HAS PLAYED A SCORE TABLE WILL BE DISPLAYED SHOWING THE RESULTS.
THE SHAPE OF THE ROAD AND THE LOCATION OF CERTAIN DANGERS ARE CHOSEN AT RANDOM.GOOD LUCK

```
2 CLS:GOSUB3690:GOTO 3222
3 GOSUB3500:TP=0:LK=1:QN=150:QM=150:CU=0:FL=9  :GOTO 2000
812 TS=TS+10:IF TS=3000 GOSUB 1050
813 IFTS=2930THENFS=1
820 IFPEEK(CF)=FLORPEEK(CF+1)=FLGOTO 1100
822 IFPEEK(CF+32)=FLORPEEK(CF+33)=FLGOTO1100
823 IF PEEK(CF+32)=QN OR PEEK(CF+33)=QN THEN GOSUB 1056
825 POKE CF,134:POKE CF+1,137:POKE CF+32,137:POKE CF+33,134
826 SC(DV)=SC(DV)+.5
830 RL=29152+K
850 POKE RL,FL:POKE RL+L,FL
856 IF FS=1THENGOTO1000
858 IF TS>BR AND BP<10 THEN 1750
859 IF TS>DR AND BP<75 THEN 1360
860 IF TS>SS AND BP<70 THEN 1600
869 D=RND(10):P=INT(RND(20))
870 IF D<5 K=K+1
875 IF D=5 THEN K=K+1
880 IF D>5 K=K-1
890 IF K<2 K=K+1
900 IF K>18 K=K-1
920 IF P<10 THEN L=L-1
930 IF P>10 THEN L=L+1
935 IF L<7 THEN L=L+1
940 IF L>8 THEN L=L-1
1000 IFPEEK(26863)=247THEN1030
1020 IFPEEK(26863)=223THEN1035
1024 IFPEEK(26815)=239THENGOSUB3490
1028 GOTO 1037
1030 CE=CF:CF=CF+1:GOTO1038
1035 CE=CF:CF=CF-1:GOTO1038
1037 CE=CF
1038 POKE CE,96:POKE CE+1,96:POKE CE+32,96:POKE CE+33,96
1039 PRINT@511," ";
1040 GOTO812
1050 FOR PZ=RL-33+1TORL+L-32:POKEPZ,QN:NEXT
1055 RETURN
1056 FOR M=0 TO 2
1057 SOUND 17,1:SOUND 22,1:SOUND 26,1
1058 NEXT:TR=0:TU=1:GOSUB 2305
1059 TS=0:POKECF,96:POKECF+1,96:POKECF+32,96
1060 POKECF+33,96
1070 FS=0:BP=0
1080 IFCF<29024THENCF=CF+64
1090 RETURN
1100 POKECF,142:POKECF+2,142:POKECF+32,142:POKECF+33,131
1102 PRINT@ 10,"[illegible]";
1103 POKECF+34,134
1104 GH=191
1110 FORYU=1TO5
1111 POKECF-32,GH:POKECF-1,GH:POKECF,GH:POKECF+1,GH:POKECF+32,
1113 SOUND30,2:SOUND20,2
1115 IFGH=191THENGH=159:NEXTYU:GOTO1110
1116 GH=191:NEXTYU
1118 FORUY=1TO200:NEXTUY:CLS
1127 PRINT@ 32,"[illegible]"
1128 PRINT@(X+96),"[illegible] "
1130 FOR T=0 TO 100:NEXT
1135 PRINT:PRINT
1136 IF SC(DV)=1 THEN PRINT"YOU WENT ";SC(DV);" MILE!":GOTO115
1137 PRINT"YOU WENT ";SC(DV);" MILES!"
1150 FORTY=1TO700:NEXT:GOSUB 3010:TS=0
1151 DV=DV+1
1152 IF DV>DE THEN 3055
1160 TR=0:FOR Z=0TO700:NEXT
1170 GOTO 3
1210 CLS:COLOR2
1211 PRINT"  OK THEN,AND HAPPY MOTORING!"
1219 COLOR1,1:COLOR,0:GOTO1219
1220 FOR X=1 TO 8
1230 IF PEEK(28971+X)=134 THEN GOTO 2515
```

The Keyboard

The keyboard is of the 'squishy' type, similar to the *VZ200*. The layout of the ASCII characters is the normal Qwerty arrangement, but anyone who is used to using the *VZ200* will find the positioning of the extra keys annoyingly unusual. The return key on the Aquarius is where the space key is on the *VZ*, the space where the shift is, the shift where the control is and the control key is up gher still. On each side of the keyboard there is a slot so keyboard overlays may t fitted. These fit around the keys and show any special functions the keys may perform. These may be easily changed for another overlay, to suit bought software such as *Finform*. On the one provided with the computer, it shows which keys match which single key entry of commands. When a key is pushed with control, the rresponding BASIC command is displayed, similar to the *VZ200*.

Two disadvantages is he standard machine has no auto repeat on the keys, and has no special editing features. You have a backspace key, but once entered you 'simply retype the line', according to the manual. I understand there is a cartridge available that has enhanced BASIC features, such as full editing, which will be reviewed in a later issue.

```
1235 NEXT
1270 PRINT@384,"[illegible]"
1280 PRINT@416,"[illegible]"
1290 FOR P=0 TO 1000:NEXT:COLOR 6
1291 PRINT@384,"      ":PRINT@416,"      "
1292 POKECF,96:POKECF+1,96:POKECF+32,96
1293 POKECF+33,96
1300 GOTO 2444
1360 IF L<6 THEN BP=BP+1:GOTO1000
1380 L=L-1
1390 GOTO 1000
1600 IF L=7 THEN 1640
1610 IF L=8 THEN 1680
1620 L=L-1
1630 GOTO 1000
1640 IF K>20 THEN L=8
1650 K=K+1
1660 BP=BP+1
1670 GOTO 1000
1680 IF K<8 THEN L=7
1690 K=K-1
1700 BP=BP+1
1710 GOTO 1000
1750 IF L=5 THEN BP=BP+1:GOTO1000
1760 L=L-1
1770 GOTO 1000
2000 POKE30744,0:TP=0
2010 POKE30862,80:POKE30863,52
2300 CLS
2302 PRINT@22,"[illegible] ";DV
2303 PRINT@54,SC$(DV)
2305 DR=2000
2306 BR=600
2308 SS=1500
2310 IF TU=1 THEN TU=0:RETURN
2311 FOR R=0 TO 15:FOR S=10 TO 20 STEP 10
2312 RL=28672
2330 IF R=8 AND S=20 THEN GOTO2350
2335 IF R=9 AND S=20 THEN GOTO2350
2340 IF R=10 AND S=20 THEN GOSUB 2360
2347 POKE RL+32*R+S,FL
2350 NEXT:NEXT
2355 GOTO2410
2360 FOR SZ=1 TO 10:POKE RL+32*R+10+SZ+32,QN
2365 NEXT
2370 RETURN
2410 CF=28956
2411 AJ=0
2444 AJ=0:AG=0:COLOR2:CF=28956
2449 POKE CF,134:POKE CF+1,137:POKE CF+32,137:POKE CF+33,134
2450 C$=INKEY$:BV=PEEK(26877)
2460 IF BV=254 GOTO1220
2480 IF C$=","AND CF<28958 THEN 2485 ELSE 2490
2485 CX=CF:CF=CF+1:GOTO2498
2490 IF C$="M"AND CF>28939 THEN 2495 ELSE 2449
2495 CX=CF:CF=CF-1
2498 POKE CX,96:POKE CX+1,96:POKE CX+32,96:POKE CX+33,96
2500 GOTO2449
2515 POKE28948,FL:POKE28980,FL:COLOR1
2625 X=USR(X):SOUND16,1:3,1
2695 FOR XX=1TO9:POKE 29024+10+XX,96:NEXT
2696 POKECF,96:POKECF+1,96:POKECF+32,96:POKECF+33,96
2700 K=10:L=10:BP=1:GK=0:GS=200:LA=0:TS=0
2710 IFLE$="1"THENCF=CF+96:XT=29055+31
2720 IFLE$="2"THENCF=CF+32:XT=28991+31
2730 IFLE$="3"THENCF=CF-96:XT=28863+31
2740 IFLE$="4"THENCF=CF-192:XT=28767+31
2750 GOTO 812
3010 IF SC(DV)>HS THEN 3030
```

Video Display

The *Aquarius* can nly be connected to a omestic television set, nd can not be connected o a monitor. In the over of the manual it ells you what channel o tune into if you live n the U.K, France, pain, Australia and ven Benelux, but not ew Zealand! On the back f the computer is a mall switch that gives ou two choices of where o tune your TV, llowing you to find the est channel. This eemed to make little ifference to my icture, but is perhaps ore applicable to other ountries. The picture as stable, with the olours reasonably risp. There are no iagonal ripples as with he *VZ200*.

In the text mode isplays 40 characters er line, with 24 lines, lthough BASIC reserves he left and right hand olumn for margins. sing PSET, PRESET and OINT, you can set, eset or check any point n a 80 by 72 resolution creen, which may be ixed with the text. here are sixteen olours, 8 distinct olours plus a different hade on each, such as ight grey and dark rey. All sixteen olours may be displayed t once, unlike the *Z200*.

Th *Aquarius* has a airly comprehensive set f characters, including good lower case with rue descenders (that s, the p's and q's sit own on the line, unlike

```
3020 IF SC(DV)<HS THEN 3045
3030 HS=SC(DV):NH(DV)=SC(DV):SC(DV)=0:HS$=SC$(DV)
3040 RETURN
3045 NH(DV)=SC(DV):SC(DV)=0
3050 RETURN
3055 CLS:PRINT:PRINT"    SCORE    TABLE"
3060 FORIP=1TODV-1:PRINTSC$(IP);TAB(10);NH(IP)
3070 NEXT
3080 PRINT:PRINT"AND THE WINNER IS......"
3090 PRINT:PRINTHS$
3094 PRINT"PRESS <E> FOR A NEW GAME"
3095 PRINT"OR PRESS <R> TO END GAME"
3096 IF INKEY$="E" THEN 1210
3097 IF INKEY$="R" THEN RUN
3098 GOTO 3096
3250 COLOR,0:DIM SC(DE):DIM SC$(DE)
3255 CLS
3260 FORIP=1TODE
3265 PRINT@128,"                                        "
3270 CLS:PRINT@128,"DRIVER ";IP;:INPUT SC$(IP)
3271 IF SC$(IP)="" THEN 3270
3275 FORIO=0TOLEN(SC$(IP))
3276 IF IO>9 THEN 3265
3277 NEXT IO
3280 NEXT IP:DL=0:DV=1
3290 GOTO 3
3460 POKEIP,96
3490 PRINT@0,"[illegible]"
3500 IF INKEY$="D" THEN 3520
3510 GOTO 3500
3520 PRINT@0,"[illegible]"
3530 FORVS=1TO300:NEXT:RETURN
3600 CLS
3610 PRINT@42,"PICK YOUR LEVEL"
3620 PRINT:PRINT
3630 PRINT"          1=HARD"
3640 PRINT"          2=AVERAGE"
3650 PRINT"          3=EASY"
3660 PRINT"          4=BEGINNER"
3661 PRINT@330,"";:INPUTLE$
3665 LV=VAL(LE$)
3670 IFLV>4 OR LV<1 THEN 3600
3680 CLS:RETURN
3690 FORL=0TO511STEP32
3691 POKE28672+L+31,128
3692 PRINT@L,"                                        "
3693 NEXT
3694 FORL=29152TO29183:POKEL,128:NEXTL
3695 PRINT@234,"[illegible]":PRINT@202,"***********"
3696 PRINT@266,"***********"
3697 PRINT@423,"BY  M AND G BAXTER"
3700 FL=191:FI=128:FN=28672:RE=FL:RP=10
3701 FORL=1TORP:FORYU=FNTO28703STEP2:POKEYU,FL:POKEYU+1,FI:NEXT
3702 FORYU=28703TO29183STEP64:POKEYU,FL:POKEYU+32,FI:NEXTYU
3703 GOSUB3850
3704 FORYU=29183TO29152STEP-2:POKEYU,FL:POKEYU-1,FI:NEXTYU
3705 GOSUB3850
3706 FORYU=29152TO28704STEP-64:POKEYU,FL:POKEYU-32,FI:NEXTYU
3789 IFFI=RETHENFL=RE:FI=159:GOTO 3791
3790 IFFL=RETHENFI=RE:FL=175
3791 NEXT L
3792 PRINT@234,"            ":PRINT@423,"                    "
3793 PRINT@202,"            ":PRINT@268,"                    "
3801 PRINT@353,"[illegible]"
3805 PRINT@295+128,"NO. OF DRIVERS  0-9"
3806 PRINT@33,"[illegible]"
3810 PRINT@231-128,"<-  MOVE CAR LEFT"
3812 PRINT@225,"[illegible]"
3815 PRINT@359-64,"G  TO START RACE"
3820 PRINT@295-128,"->  MOVE CAR RIGHT"
3830 RP=1000:GOTO3701
3850 DE$=INKEY$
3860 DE=VAL(DE$)
3865 IFDE>0ANDDE<10THEN3250
3875 RETURN
```

some machines), an asortment of characters made up of blocks, similar to the *VZ*'s low resolution characters, but of a much better resolution. Also included in the set is a large range of graphics characters including aeroplanes, circles, arrows, 1/2, 1/4, 3/4, a copyright sign, arrows, martians and a complete t for a man that can run left, right and stand still.

A DSE advertisement i sts a graphics resolution of 320x192, but I saw no mention of it in any of the manuals. Unless they were refering to the graphics characters making up an *effective* resolution, that is, all the separate points in the character make up this resolution, I have not seen this sort of resolution. Perhaps the extended BASIC catridge ers this?

Sound

The sound for the *Aquarius* comes through a TV speaker, giving uch better sound than he little 'speaker' in he *VZ200*. Whenever an rror is made, a beep is enerated, usful if you an't touch type.

To make a sound, you ust specify the uration, then the itch. The duration may ist a split second or ch, much longer. The tch may be set to a gh frequency or so ow that it becomes a ronome, in very small rements. This simple nd command, with table loops, allows you to create some interesting sound effects such as aeroplanes, lasers, flatulence(!), and sirens. Although not up to some of the more sophisticated computers, it allows for much greater versatility than the *VZ200*.

Cassette Storage

As mentioned earlier, cassette leads are an added extra. They consist of two jack plugs connected to a 5 pin DIN plug. There is no provision for cassette motor control. The cassette recorder DSE recomends works, but the computer is fairly fussy about the volume.

You can load, save or verify (CLOAD*) a program with a filename of up to six characters. The computer skips files of non-matching filenames. There is no provision for saving variables to cassette.

The Language

The basic *Aquarius* comes with Microsoft BASIC in 10K of ROM. This is an unusual language, because although it is standard Microsoft, and has some added commands, some of the simpiler commands have been left out. For example, there is no CLS command. To clear the screen, you must type in PRINTCHR$(11). But on the other hand, you can RESTORE the DATA command pointer to a line number, so it will read the next piece of data from that DATA statement.

Control of the colour is, to say the least, strange. There are two blocks of video memory. As well as a block for the characters, there is also a corresponding block to suit the colour. So to change a colour, you must poke the corresponding byte in memory with the colour code. There is no COLOUR command. This is gone into greater detail in the manual, and rightfully so! I understand that the extended BASIC cartridge simplifies this process.

The *Aquarius* BASIC runs faster than the *VZ200* BASIC. For example a simple FOR/NEXT loop counting up to 1000 takes about a second longer on the *VZ200*. To write even faster programs, there is a USR command that allows you to run machine code programs, although this not gone into in any detail at all in the manual.

Documentation

The manual that is provided with the *Aquarius* is designed for beginners, which is where the machine is aimed at. It explains well how the computer should be set up and how to look after it, as well as how to program it. The manual teaches how to program, assuming you have little or no previous knowledge of computing. Also included are example programs and a sample run for 'hands on' learning.

Also provided are 'Simplified Instruction Cards'. These are cards bound by a wire spine on

a triangular fame so the cards stand up and can be easily flipped over for quick reference. I think this is a excellent idea, allowing you to quickly look up colour codes, or the ASCII character set, or a screen memory map instead of having to search through a manual. The only problem is that the Aquarius people wasted it by putting things like 'Your first program', explaining about the keyboard overlay, and other things that you would read once and ignore, and would have been better in the manual!

One thing I found missing from the manual was any sort of technical information- not even a simple memory map. There were not even any specifications!

Expandability

DSE sells a suitable 'Datacassette' for $64.95. A Mini Expander which allows you to plug in cartridges and the memory expansion, with dual game controllers and three additional sound channels is available for $89.95. The 16K RAM module sells for $109.95. A thermal printer sells for $179.95 and plugs straight into the machine with no need for an interface.

Three cartridges are available at the moment. They are Microsoft Basic, Finform, both for $79.95, and the language Logo, for $69.95. At the moment there are 8 cassette software titles available for $12.95. Obviously this range should increase with time.

These add-ons will be reviewed at a later date.

Summary

For a first time computer buyer, the *Aquarius* offers good value for money, being just over half the price of the *VZ200* when it was first released. The relativly low cost of expandability means that an *Aquarius*, Mini Expander and 16k RAM module costs less than $380. This computer should be a serious consideration for a first time buyer.

Specifications

Z80A Microprocessor
10k ROM (Microsoft BASIC), plus Plug in Cartridges
2K RAM (expandable to 34k)
49 Moving-key Keyboard
40 Column x 24 Line Text Display
16 Colours
320 x 192 Graphics Resolution (see text)
One Channel Sound (Expandable to 4)
Thermal Printer and Joysticks available

FOR SALE

VZ200
DATASETTE
16K RAM
PRINTER INTERFACE
W/PROCESSOR
HEX UTILITIES
ED/ASSEMBLER
$350 O.N.O.

MONITOR
BRANDT GREEN
SCREEN
$200

PAT FYERS
PH AUCK 569524

MISSILE M KING AUCKLAND

```
5 COLOR2
10 CLS
20 MODE(1)
30 DIMY(3),F(3)
40 N=1:MS=4
50 PS=RND(4)+2
60 P=RND(51)+4
70 GOSUB400
75 N$=INKEY$
80 FORK=PSTO122STEPPS
90 X=K-PS:Y=63-P:C=1:GOSUB300
100 X=K:C=2:GOSUB300
110 F$=INKEY$:IFF$=""ORN>3THEN140
120 F(N)=1
130 N=N+1
140 FORJ=1TO3
150 C=1:GOSUB350
160 IFF(J)=0ORY(J)>59THEN210
170 Y(J)=Y(J)+MS
180 C=4:GOSUB350
200 IFH=1THEN250
210 NEXTJ
220 NEXTK
230 PRINT@232,"MISSED!"
240 GOTO500
250 PRINT@232,"HIT!!!"
260 GOTO500
300 COLOR0
310 FORI=0TO4:SET(X+I,Y):NEXT:SET(X,Y-1)
320 RETURN
350 COLOR0
360 SET(35+J,62-Y(J)):IFPOINT(35+J,61-Y(J))=2THENH
365 IFPOINT(35+J-1,62-Y(J))=2THENH=1
366 IFPOINT(35+J+1,62-Y(J))=2THENH=1
370 RETURN
400 FORJ=1TO3
410 FORI=-2TO2:SET(35+J+I,63):NEXT
420 NEXT
430 RETURN
500 PRINT"ANOTHER GAME ? (Y/N)"
510 A$=INKEY$:A$=INKEY$:IFA$="Y",RUNELSEIFA$<>"N",
```